

CLAIMS

1. An electrically heatable glazing panel comprising a substrate and at least two electrically heatable zones, each electrically heatable zone comprising:

i) a substantially transparent, electrically conductive coating layer,

5 ii) spaced bus bars adapted to supply electrical voltage across the substantially transparent, electrically conductive coating layer, and

iii) a conductive path defined between the bus bars,

10 in which, at at least one of the electrically heatable zones the conductive path changes direction at least once along its length within the electrically conductive coating layer so as to double back upon itself.

2. An electrically heatable glazing panel according to claim 1 in which at least one portion of the conductive path extends substantially from a lower edge of the glazing panel to an upper edge of the glazing panel.

3. An electrically heatable glazing panel according to any preceding claim in which at at least two electrically heatable zones, the conductive path changes direction at least once along its length within the electrically conductive coating layer so as to double back upon itself.

20 4. An electrically heatable glazing panel according to claim 3 in which the length of the conductive path is substantially the same in each zone.

5. An electrically heatable glazing panel according to any preceding claim in which all of the bus bars are located along the length of a same edge of the glazing panel.

25 6. An electrically heatable glazing panel according to claim 5 in which the bus bars are provided along the length of the lower edge of the glazing panel.

7. An electrically heatable glazing panel according to any preceding claim in which the electrically heatable zones are delimited by at least one zone boundary which is substantially insulating.

8. An electrically heatable glazing panel according to claim 7 in which the one or more zone boundaries are provided by non-coated portions of the glazing panel.

9. An electrically heatable glazing panel according to any of claims 7 to 8 in which the one or more zone boundaries have a width of less than 150 μm .

10. An electrically heatable glazing panel according to any preceding claim in which the coating layer is a solar control coating layer.

11. An electrically heatable glazing panel according to any preceding claim in which the coating layer has a resistance comprised between 2 and 25 ohms/square.

12. An electrically heatable glazing panel according to any preceding claim in which the substrate is a glass sheet.

13. An electrically heatable glazing panel according to any preceding claim in which the glazing panel is thermally toughened.

14. An electrically heatable glazing panel according to any preceding claim in which the glazing panel is laminated.

15. An electrically heatable glazing panel according to any preceding claim in which the glazing panel is an automotive side window.

16. An electrically heatable glazing panel according to any preceding claim in which the glazing panel has at least one acute angle.

17. An electrically heatable glazing panel according to claim 16 in which the glazing panel is of substantially triangular shape.

18. An electrically heatable glazing panel according to any preceding claim in which the electrically conductive coated layer is deposited directly on a surface of the substrate.

19. An electrically heatable glazing panel according to any one of claims 1 to 17 in which the electrically conductive coated layer is carried by a thin plastic film assembled as part of the glazing panel.

20. An electrically heatable glazing panel according to any preceding claim in which the variation in temperature across all electrically heatable zones is less than 15°C when a voltage is applied across the coating layer of the glazing panel

via the first and second bus bars and after the glazing panel has reached equilibrium conditions with its surroundings, the surroundings being at room temperature.

21. An electrically heatable glazing panel comprising
spaced first, second and third electrical bus bars arranged in order at and along an
5 edge of the glazing panel
a first electrically heatable pathway defined between the first and the second bus bars
a second electrically heatable pathway defined between the second and the third bus
bars.

22. An electrically heatable glazing panel in accordance with claim
10 21, which is adapted to provide for electrical heating of the first electrically heatable
pathway by means of a difference in electrical potential applied between the second
and first bus bars and which is adapted to provide for electrical heating of the second
electrically heatable pathway by means of a difference in electrical potential applied
between the second and third bus bars.

15 23. An electrically heatable glazing panel in accordance with claim
21 or claim 22, in which the first and third bus bars are adapted to be maintained at
substantially the same electrical potential for heating of the first and second
electrically heatable pathways.

20 24. An electrically heatable glazing panel in accordance with any one
of claims 21 to 23, in which, for heating of the first and second electrically heatable
pathways, the second bus bar is adapted to be maintained at a negative electrical
potential and the first and the third bus bars are adapted to be maintained at a
positive electrical potential.

25 25. An electrically heatable glazing panel in accordance with any one
of claims 21 to 24, in which the glazing panel further comprises
a fourth electrical bus bar spaced from and arranged in order with the first, second
and third electrical bus bars at and along an edge of the glazing panel
a third electrically heatable pathway defined between the third and the fourth bus
bars.

30 26. An electrically heatable glazing panel in accordance with claims
25, further comprising

a fifth electrical bus bar spaced from and arranged in order with the first, second, third and fourth electrical bus bars at and along an edge of the glazing panel
a fourth electrically heatable pathway defined between the fourth and the fifth bus bars.

5 27. An electrically heatable glazing panel in accordance with any one of claims 21 to 26, in which the electrically heatable pathways are provided by portions of an electrically heatable coating layer provided as part of the glazing panel.

 28. An electrically heatable glazing panel in accordance with any one of claims 21 to 26, in which the electrically heatable pathways are provided by
10 electrically heatable wires.

 29. An electrically heatable glazing panel in accordance with any one of claims 21 to 28, in which the bus bars are substantially parallel and/or substantially co-linear and/or substantially co-axial.